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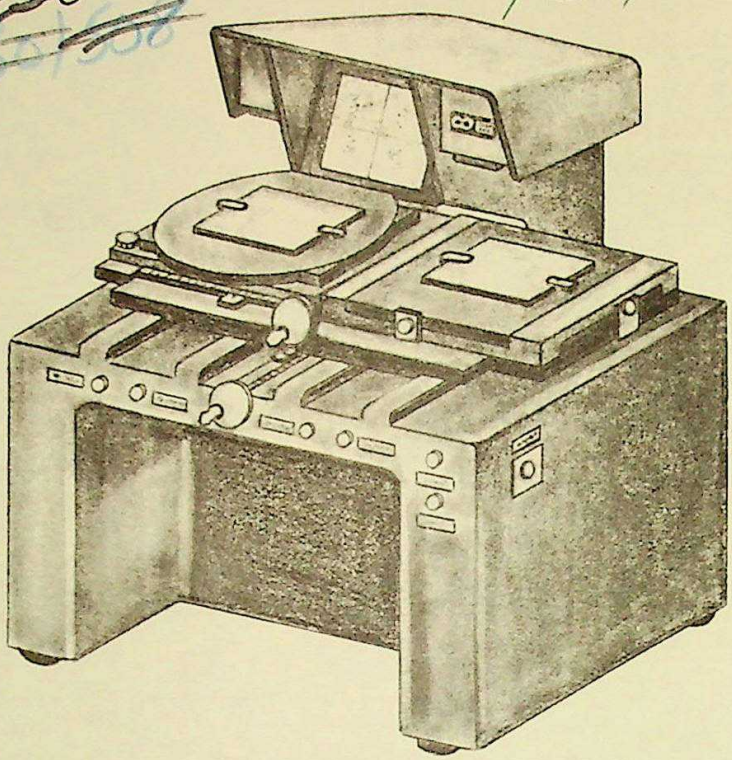
SPEC. SHEET 5-71-1
GAERTNER
Optical Instrumentation

OCT 1971



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THE GAERTNER ABC BLINK COMPARATOR

Especially designed for Astronomers engaged in star plate comparison activities

The Gaertner ABC Blink Comparator was "designed with the user in mind". It is based on what practicing professional astronomers have told us was needed.

The result is a relatively low cost, highly reliable blink comparator capable of handling star plates up to 10" X 10" with a resolution of at least 10 micrometers. The two optical projection paths may be blinked sequentially at rates from 2 to 20 per second or the blinking system may be stopped for single or superimposed projection at will. Carriage position is read to 0.1 mm with the aid of a scale and vernier. The Gaertner ABC unit embodies many conveniences and features that have previously been found only in far more involved and expensive systems.

The entire system is attractively housed in a compact 48" high, 36" wide by 38" deep console work station. The large 200 mm X 200 mm projection screen is located just behind and slightly above the stages on which the plates are mounted. The screen is inclined 15° from vertical to permit a comfortable viewing position. The operator works in a seated position with full access to all the necessary controls and adjustments. The convenient table height of the working surface and the ample illumination, approximately 10 foot candles, from the balanced light path provision, further reduces operator fatigue. Convenient 90° cross lines mark the center of the screen.

Plates are securely held by clips on the stages. One stage may be rotated about its center through 22-1/2° either side of zero and the other may be coordinately positioned 1" either side of zero. These adjustments, which permit easy plate alignment, are completely independent of each other and are made to allow true finesse in final adjustments. All size plates up to 10" X 10" can be accommodated. Adapters are included for the 8" X 10" size (none are needed for 10" X 10"). Adapters for other sizes can be furnished by Gaertner.

The 2 beam illumination system includes iris diaphrams and filter holders in each beam to allow for proper balancing of the beams after plates are put on the stages, without changing the color temperature. The two light paths are factory adjusted for balance. Provision is made for electrical adjustment if it should become necessary.

The small variances between plates, due to differences in exposures or emulsion changes, are compensated for by an adjustment if magnification up to ±0.1% which the operator makes at the time of plate setup.

Because the optical system erects the image, the projection is in a conventional orientation. With the emulsion side of the plate down, and north positioned away from the operator, the projection displays north as up and east to the left. The operator may then use any suitable marker on the exposed non-emulsion side of the plate for "flagging" specific images without concern for damaging the emulsion.

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THE GAERTNER ABC BLINK COMPARATOR
Detailed Specifications

Projection

Magnification	10 X (20X optional at time of order)
Field of View: at 10X	20 mm X 20 mm
at 20X	10 mm X 10 mm
Screen Size	200 mm X 200 mm
Reference at Center	90° Crosslines
Image Orientation	Erect N on top E on left with emulsion side down
Resolution	At least 0.010 mm
Compensation for Photoplate Variations	At least ± 0.1% magnification

Plate Mounting & Adjustment

Clear Aperture	9-1/2" X 9-1/2" (with slight radius at corners)
Plate Size	10" X 10", 8" X 10" with adapters. (Smaller sizes can be accommodated with adapters – not incl.)
Rotational Adjustment	Left stage only – ± 22-1/2° (Manual)
Coordinate Adjustment	Right Stage only – ± 1" (Manual)

Illumination

Intensity Control	
a) For Matching Plates	Iris Diaphragm & Filter Holders in each beam. (Filters not incl.)
b) For balancing Optical Beams (Color Temperature)	Electrical Adjustment made at factory. (Not readily accessible)
Intensity at Screen	Approx. 10 foot candles.

Blink

Rate	Variable from 2 to 20 per second.

Manual Controls provided to move blink chopper in and out of the optical paths; and operate shutters to alternate fields or clear both fields.

Carriages

X-Y Travel and Measuring Range	254 mm x 254 mm
Drive	Manual
Scales	1 mm divisions each cm. numbered
Vernier	10 part (for 0.1 mm reading)
Center of plates	Scale readings on the plate increase from west to east (X) and south to north (Y) with center reading 125 mm (Assumes emulsion side down and N away from operator)

General

Electrical Input	115V., 60 Hz.
Console Size	48"H X 36"W X 38" D
Note: 46" space needed in width for carriage travel clearance	
Height of stage surface	31"
Eyepoint Height	Approx. 15" Above stages
Weight	700 pounds (Approx.)

For a quotation or more information write or call.

GAERTNER®

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